

REMARKS

Claims 1-6 are pending in this application. By this Amendment, claims 1-3 are amended for formality reasons only and the scope of the claims is not affected. Also by this Amendment, new claims 5 and 6 are added. Support for the amendment may be found in, for example, at least the specification between line 12 of page 44 and line 19 of page 46 and between line 4 of page 47 and line 6 of page 50, or in paragraphs [0160]-[0166] and [0169]-[0177] of corresponding U.S. Patent Publication No. 2004/0224643. Support for the amendment may also be found in at least Figures 28, 29, and 32-35. No new matter is added. Reconsideration of the application is respectfully requested.

I. Claims Define Patentable Subject Matter

The Office Action provisionally rejects claims 1-4 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15 and 20 of copending U.S. Application No. 10/774,606, and also over claims 1, 4, and 6 of copending U.S. Application No. 10/545,270. Applicant traverses the rejections and submits herewith Terminal Disclaimers for each of the copending applications. Thus, Applicant requests the withdrawal of the double patenting rejections of claims 1-4.

Next, the Office Action rejects claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over *Atarius et al.* (U.S. Patent No. 6,920,324; hereinafter *Atarius*) in view of *Yamakawa et al.* (U.S. Patent No. 6,985,712; hereinafter *Yamakawa*). Applicant respectfully traverses the rejection of claims 1-4.

A. Claims 1-6 are Patentable Over Cited Prior Art

With respect to claims 1-6, Applicant asserts that *Atarius* and *Yamakawa*, taken individually or in combination, fail to disclose or suggest a front end module for processing transmission signals and reception signals in first and second frequency bands, where the front end module includes at least a second separating means for separating the transmission

signals and the reception signals in the first frequency band from each other, where the second separating means is connected to a first separating means connected to an antenna, and the second separating means includes a first pair of two acoustic wave elements that each functions as a filter, as recited in independent claim 1.

Specifically, *Atarius* teaches a transceiver circuit 232 that performs a soft hand-over of a mobile terminal 22 that communicate to base transceivers 24a and 24b using different communication channels (*Atarius*, Abstract; Fig. 1). Transceiver circuit 232 includes a diplexer 54 that routes incoming signals to one of duplexer circuits 56 and 58 depending whether the signals is in the 800 MHz or 1900 MHz band (*Atarius*, Fig. 5). However, as the Office Action correctly recognizes, *Atarius* fails to disclose "that the second separating means includes two acoustic wave elements each of which functions as a filter, the third separating means includes two acoustic wave elements each of which functions as a filter, and a single multi-layer substrate for integrating the first to the third separating means, wherein the first separating means is made up of a conductor layer located inside or on a surface of the multi-layer substrate" (Office Action, pg. 4, ll. 10-15).

Instead, the Office Action alleges that *Yamakawa* cures the deficiencies of *Atarius* by teaching a front end module that "comprises diplexer 303 and duplexer 308... wherein the duplexer 308 includes two acoustic wave elements 411, 414 each of which functions as a filter..." (Office Action, pg. 3, ll. 15-22). Applicant respectfully disagrees.

Yamakawa discloses an RF device that contains surface acoustic wave (SAW) filters 102a-b respectively connected to receiving terminals Rx1 and Rx2 (*Yamakawa*, col. 6, ll. 66-67; Figs. 6 and 7). *Yamakawa* also discloses a duplexer 308 having quarter-wavelength tip-short-circuited resonators 411a-b and 414 a-b respectively connected to one of transmitting terminal Tx3 and receiving terminal Rx3 (*Yamakawa*, col. 7, ll. 19-46; Figs. 6 and 7). Applicant respectfully notes that acoustic wave elements, as described in the present

application's specification on page 5, lines 4 to 7, utilize acoustic waves. For example, acoustic wave elements may be classified as surface acoustic wave elements that utilizes surface acoustic waves, as bulk acoustic wave elements that utilizes bulk acoustic waves, or the like.

In contrast, *Yamakawa*'s disclosed quarter-wavelength tip-short-circuited resonators 411a-b and 414 a-b utilize a distributed constant line, not acoustic waves. Therefore, tip-short-circuited resonators 411a-b and 414 a-b in *Yamakawa* are not acoustic wave elements. Thus, *Yamakawa* fails to disclose or render obvious a front end module for processing transmission signals and reception signals in first and second frequency bands, where the front end module includes at least a second separating means for separating the transmission signals and the reception signals in the first frequency band from each other, where the second separating means is connected to a first separating means connected to an antenna and includes a first pair of two acoustic wave elements that each functions as a filter, as recited in independent claim 1. Accordingly, a combination of *Atarius* and *Yamakawa* would not arrive at the subject matter as recited in independent claim 1.

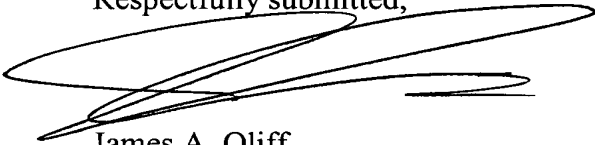
In accordance with the above remarks, Applicant submits that independent claim 1 defines patentable subject matter. Claims 2-6 depend from claim 1, and therefore, also define patentable subject matter, as well as for the additional features they recite. Accordingly, Applicant respectfully requests the withdrawal of the § 103(a) rejection of claims 1-4, and submits that new claims 5 and 6 are patentable over cited prior art.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration of claims 1-4 and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: April 16, 2007

Attachment: Terminal Disclaimer for copending U.S. Application No. 10/774,606
Terminal Disclaimer for copending U.S. Application No. 10/545,270

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